Les A. Cartier and Associates, Inc.

Lead Based Paint
Dust Wipe Analysis
Dust Hazard Mitigation Plan
and
Lead Inspection Report
Risk Assessment (preliminary phase)

Project:

195 McGregor Street,
Manchester, NH 03102

Residential Report

Date:

May 29, 2015

Prepared By:

American Environmental Testing Services, LLC
1 Hardy Road, Suite #218 Bedford, NH 03110

Certification of Field Activities

Risk Assessment

Site Location:	195 McGregor St., Manchester NH 03102
Conducted By:	Warren Laskey
Title:	Risk Assessor
License:	NH Risk Assessor # RA-029
	I hereby certify that sampling and analyses have been conducted pursuant to He-P 1608.04 and accurately represents the conditions in the areas tested on this date
Lead Hazards Identified:	[Yes] No
Dates:	**Previous Inspections: Yes, see attached** **Lead Dust Wipe Inspection: May 22-29, 2015 By Warren Laskey**

Report Preparation

Prepared By:	Warren Laskey
Title:	Risk Assessor, NH License RA-029
Dates:	**May 29, 2015**
Signature:	Warren M. Laskey

Property Owner's are required to disclose lead hazards in accordance with 40 CFR Part 745.107, July 1, 1998 edition **entitled, Disclosure Requirements for Sellers and Lessors.**

Table of Contents

1.0 Executive Summary

American Environmental Testing Services, LLC (AETS) has been retained by Les A. Cartier and Associates, Inc. to perform lead dust analysis inspections and risk assessments at 195 McGregor St., Manchester in response to a renovation project in the building which allowed lead dust to migrate through the occupied residential units and commercial space.

The purpose of the inspection was to identify the existence, nature, severity, source and location of dust containing lead (or document that no such hazards were identified) by interpreting analytical measurements of lead in dust, and soil along with the assessment of the physical condition of components covered with lead-based paint.

Previous lead in dust inspections were performed by a private risk assessor and NH Healthy Homes and Lead Poisoning Prevention Program personnel and are attached.

The lead dust wipe analysis inspection and preliminary risk assessment on May 22-29, 2015 consisted of:

1. Development of a sampling plan to test 41 units for lead dust hazards
2. Schedule, access and test 10-14 locations in each unit for lead dust per HUD protocol
3. Test interior common areas (hallways and stairways)
4. Interpret findings to determine location of units with dust elevations
5. Identify and prioritize locations to concentrate cleaning efforts
6. Disseminate dust results and communicate action plan to all interested residents
7. Schedule Re-cleaning and re-testing to achieve passing results in all 41 units
8. Monitor as needed cleaning efforts, including re-testing when necessary
9. Completion of risk assessments, including occupant use patterns, physical building characteristics
10. An XRF inspection on the interior of 41 units, common areas and exterior of the building
11. Development of a Lead Exposure Hazard Reduction Plan (LEHRP)
12. Abatement of any remaining lead exposure hazards
13. Issuance of Certificates of Lead Safe for each unit tested (after clearance, if necessary)

2.0 Site Description

195 McGregor St. is a 4 story multi-use mill building with 98 residential units on its north side and commercial units to the south. The building underwent renovation by sandblasting in an unoccupied area of the first floor. Poor engineering controls and improper containment allowed lead dust to migrate to the occupied units, interior common areas and commercial units.

3.0 Definitions of Lead Based Paint, Lead in Dust and Lead in Soil

The State of NH & U.S. Department of Housing and Urban Development (HUD) have established a definition of lead-based paint as a dried paint film that contains lead greater than **0.5% by weight** when utilizing laboratory analysis or **equal to greater than 1.0 mg/cm^2** when utilizing X-Ray Fluorescence (XRF) analysis.

The following lead in dust threshold values are utilized to determine when corrective actions are required:

SURFACE	THRESHOLD LIMIT
Floors	40 ug/ft^2
Interior window sills	250 ug/ft^2
Window wells	400 ug/ft^2

The NH regulation for lead in soil is 400 ppm for play areas or high contact areas and 1200 ppm for residential yards.

4.0 XRF Testing (future)

Not included in this report (at this time) will be a detailed XRF Report. Field measurements by XRF will be taken using standards set forth in the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, June 1995 and Chapter 7 revision of 1997.

The future detailed report will show all the readings that were taken by side of building according to street location. As noted on the enclosed floor plans, **Side "A" on the room pages is where the main front of the building (street side) is located.** Going clockwise with your back to the street ("A" side), side "B" will always be to your left, side "C" directly in front of you and side "D" to the right. Doors and windows are designated as left, center or right depending on their location on the room pages. Readings that are greater than or equal to the regulatory limit of 1.0 milligram per centimeter squared (mg/cm^2) are entered in the Lead Column of the Report.

The calibration of the RMD LPA-1 is done in accordance with Performance Characteristic Sheets (PCS). The XRF instrument is calibrated using the calibration standard block of 1.0 mg/cm^2. Three calibration readings are taken before and after each unit is tested to insure manufacturer's standards are met. All calibrations are done in the Standard Mode in accordance with the PCS.

All testing for was done using the RMD LPA-1 in the *Quick Mode* setting. At least one reading will be taken for each area surveyed.

4.1 XRF Findings (future)

Not applicable at this date

4.2 Paint Condition Assessment (future)

An assessment of the conditions of painted surfaces will be performed as part of the completion of the risk assessment. The condition of each observed component will be rated in accordance with the criteria established in Chapter 5 – Table 5.3 Conditions of Paint Film Quality of the HUD Guidelines. The following table is a reproduction of the HUD evaluation criteria applied on this project.

Type of Building Component	Total Area of Deteriorated Paint on Each Component		
	Intact	Fair	Poor
Exterior components with large surfaces areas.	Entire surface is intact.	Less than or equal to 10 square feet.	More than 10 square feet.
Interior components with large surface areas (walls, ceilings, floors, doors).	Entire surface is intact.	Less than or equal to 2 square feet.	More than 2 square feet.
Interior and exterior components with small surface areas (window sills, baseboards, soffits, trim)	Entire surface is intact.	Less than or equal to 10 percent of the total surface area of the component.	More than 10 percent of the total surface area of the component.

The assessment of condition for each painted surface can be found in the XRF Inspection, when completed in the appendix. Each surface is rated D for deteriorated if it meets the Fair, or Poor as it corresponds to the information presented above.

5.1 Methodology

The property manager communicated to all residents the existence of potential lead dust in their units and offered to perform dust wipe testing in all units if requested. This was a targeted approach, and 24 units' tenants accepted the invitation to be tested. The remaining units were selected randomly. AETS's, Risk Assessor performed a visual inspection to locate the existence of potential lead exposure hazards in dust. Future completion of the inspection will include assessment of paint which is located on chewable, friction or impact surfaces, or is in a deteriorated condition, and to assess the extent and causes of any deteriorated paint or lead exposure hazards;

5.2 Table of Dust Wipe Results by Unit (41 units) (42)

Attached is a table of dust wipe results for each of the 41 units sampled. Yellow highlighted areas are where dust exceeds the hazard threshold described above.

5.2 Dust Wipe Results by Unit (individual unit reports)

Attached are dust wipe results for each of the 41 units sampled.

6.0 Conclusions and Cleaning Recommendations

The results of this lead dust inspection indicated that **thirty six (~~36~~ 37) of forty one (~~41~~ 42)** units tested by AETS contain lead dust in amounts greater than or equal to 40 ug/ft^2 in lead dust on floors, 250 ug/ft^2 in lead dust on window sills and 400 ug/ft^2 in lead dust on window wells. The majority of units with failing dust are on the McGregor Street side, with 3 units passing dust on the river side, 4th floor.

Cleaning: HUD Guidelines (attached)

Cleaning: NH He-P 1600 Guidelines 1608.11 (attached)

All corrective action should be performed by appropriately trained and or licensed individuals. Interim Controls require the use of Renovation, Repair and Painting (RRP) personnel.

7.0 Re-Sampling Recommendations

Lead Dust Hazards may be corrected through the utilization of cleaning methods as prescribed by He-P 1600 and the HUD Guidelines. Re-sampling should be performed as soon as possible following a thorough cleaning.

8.0 Completion of Risk Assessments

See 4.2 for details on risk assessments to identify other lead exposure hazards that may be identified in residential units

Summary

Lead dust hazards exist in a high percentage of units tested. Although some hazards may be due to historical dust accumulation, there is no way to know precisely when the dust entered the units, only to respond as thoroughly and efficiently as possible.

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date Sampled	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	324 Rm. 1 A-Left Floor	5/22/2015	W. Laskey RA-029	15	40 ug/ft2	No	N/A	N/A
2	324 Rm. 1 A-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	31	250 ug/ft2	No	N/A	N/A
3	324 Rm. 1 A-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	13	400 ug/ft2	No	N/A	N/A
4	324 Rm. 1 A-Right Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
5	324 Rm. 1 A-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	37	250 ug/ft2	No	N/A	N/A
6	324 Rm. 1 A-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	110	400 ug/ft2	No	N/A	N/A
7	324 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	324 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	324 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	324 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	324 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	414 A-Left Floor	5/22/2015	W. Laskey RA-029	35	40 ug/ft2	No	N/A	N/A
2	414 A-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	54	250 ug/ft2	No	N/A	N/A
3	414 A-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	390	400 ug/ft2	No	N/A	N/A
4	414 A-Right Floor	5/22/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
5	414 A-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	52	250 ug/ft2	No	N/A	N/A
6	414 A-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	6,500	400 ug/ft2	Yes	5/26/2015	Passed
7	414 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	414 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	414 Rm. 1 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	414 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	414 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	403 Rm. 3 C-Left Floor	5/22/2015	W. Laskey RA-029	50	40 ug/ft2	Yes	Pending	
2	403 Rm. 3 C-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	85	250 ug/ft2	No	N/A	N/A
3	403 Rm. 3 C-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	440	400 ug/ft2	Yes	Pending	
4	403 Rm. 3 C-Right Floor	5/22/2015	W. Laskey RA-029	110	40 ug/ft2	Yes	Pending	
5	403 Rm. 3 C-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	110	250 ug/ft2	No	N/A	N/A
6	403 Rm. 3 C-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	200	400 ug/ft2	No	N/A	N/A
7	403 Rm. 1 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	403 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	403 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	403 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	403 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	403 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	402 Rm. 1 A-Right Floor	5/22/2015	W. Laskey RA-029	160	40 ug/ft2	Yes	Pending	
2	402 Rm. 1 A-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	810	250 ug/ft2	Yes	Pending	
3	402 Rm. 1 A-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	230	400 ug/ft2	No	N/A	N/A
4	402 Rm. 1 A-Left Floor	5/22/2015	W. Laskey RA-029	840	40 ug/ft2	Yes	Pending	
5	402 Rm. 1 A-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	420	250 ug/ft2	Yes	Pending	
6	402 Rm. 1 A-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	200	400 ug/ft2	No	N/A	N/A
7	402 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	402 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	402 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	402 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	402 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	402 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	401 Rm. 1 B Floor	5/22/2015	W. Laskey RA-029	28	40 ug/ft2	No	N/A	N/A
2	401 Rm. 1 B Int. Window Sill	5/22/2015	W. Laskey RA-029	320	250 ug/ft2	Yes	Pending	
3	401 Rm. 1 B Ext. Window Well	5/22/2015	W. Laskey RA-029	860	400 ug/ft2	Yes	Pending	
4	401 Rm. 2 B Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
5	401 Rm. 2 B Int. Window Sill	5/22/2015	W. Laskey RA-029	250	250 ug/ft2	Yes	Pending	
6	401 Rm. 2 B Ext. Window Well	5/22/2015	W. Laskey RA-029	970	400 ug/ft2	Yes	Pending	
7	401 Rm. 2 D Floor	5/22/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
8	401 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	401 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	401 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	441 Rm. 2 C-Left Floor	5/22/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
2	441 Rm. 2 C-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	85	250 ug/ft2	No	N/A	N/A
3	441 Rm. 2 C-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	170	400 ug/ft2	No	N/A	N/A
4	441 Rm. 2 C-Right Floor	5/22/2015	W. Laskey RA-029	32	40 ug/ft2	No	N/A	N/A
5	441 Rm. 2 C-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	15	250 ug/ft2	No	N/A	N/A
6	441 Rm. 2 C-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	57	400 ug/ft2	No	N/A	N/A
7	441 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	441 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	441 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	441 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	441 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	441 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	446 Rm. 1 A-Right Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	446 Rm. 1 A-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	130	250 ug/ft2	No	N/A	N/A
3	446 Rm. 1 A-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	120	400 ug/ft2	No	N/A	N/A
4	446 Rm. 1 A-Left Floor	5/22/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
5	446 Rm. 1 A-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	160	250 ug/ft2	No	N/A	N/A
6	446 Rm. 1 A-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	500	400 ug/ft2	Yes	Pending	
7	446 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	446 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	446 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	446 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	446 Rm. Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	446 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	449 Rm. 1 C-Left Floor	5/22/2015	W. Laskey RA-029	31	40 ug/ft2	No	N/A	N/A
2	449 Rm. 1 C-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	22	250 ug/ft2	No	N/A	N/A
3	449 Rm. 1 C-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	200	400 ug/ft2	No	N/A	N/A
4	449 Rm. 1 C-Right Floor	5/22/2015	W. Laskey RA-029	10	40 ug/ft2	No	N/A	N/A
5	449 Rm. 1 C-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	74	250 ug/ft2	No	N/A	N/A
6	449 Rm. 1 C-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	210	400 ug/ft2	No	N/A	N/A
7	449 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	449 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	449 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	449 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	449 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	449 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	322 Rm. 3 C-Left Floor	5/22/2015	W. Laskey RA-029	250	40 ug/ft2	Yes	Pending	
2	322 Rm. 3 C-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	620	250 ug/ft2	Yes	Pending	
3	322 Rm. 3 C-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	2100	400 ug/ft2	Yes	Pending	
4	322 Rm. 3 C-Right Floor	5/22/2015	W. Laskey RA-029	410	40 ug/ft2	Yes	Pending	
5	322 Rm. 3 C-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	120	250 ug/ft2	No	N/A	N/A
6	322 Rm. 3 C-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	1200	400 ug/ft2	Yes	Pending	
7	322 Rm. 1 A-Floor	5/22/2015	W. Laskey RA-029	34	40 ug/ft2	No	N/A	N/A
8	322 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	322 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	322 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	322 Hall A-Floor	5/22/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
12	322 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
13	322 Rm. 3 C-Left Int. Wind. Sill: MAS	5/22/2015	W. Laskey RA-029	1300	250 ug/ft2	Yes	Pending	
14	322 Rm. 3 C-Right Int. Wind. Sill: MAS	5/22/2015	W. Laskey RA-029	570	250 ug/ft2	Yes	Pending	
1	417 Rm. 2 C-Left Floor	5/22/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
2	417 Rm. 2 C-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	46	250 ug/ft2	No	N/A	N/A
3	417 Rm. 2 C-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	59	400 ug/ft2	No	N/A	N/A
4	417 Rm. 2 C-Right Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
5	417 Rm. 2 C-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	38	250 ug/ft2	No	N/A	N/A
6	417 Rm. 2 C-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	63	400 ug/ft2	No	N/A	N/A
7	417 Rm. 1 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	417 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	417 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	417 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	417 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	417 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	420 Rm. 1 A-Left Floor	5/22/2015	W. Laskey RA-029	24	40 ug/ft2	No	N/A	N/A
2	420 Rm. 1 A-Left Int. Window Sill	5/22/2015	W. Laskey RA-029	250	250 ug/ft2	Yes	Pending	
3	420 Rm. 1 A-Left Ext. Window Well	5/22/2015	W. Laskey RA-029	410	400 ug/ft2	Yes	Pending	
4	420 Rm. 1 A-Right Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
5	420 Rm. 1 A-Right Int. Window Sill	5/22/2015	W. Laskey RA-029	29	250 ug/ft2	No	N/A	N/A
6	420 Rm. 1 A-Right Ext. Window Well	5/22/2015	W. Laskey RA-029	190	400 ug/ft2	No	N/A	N/A
7	420 Rm. 2 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	420 Rm. 3 A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	420 Bath A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	420 Kitchen A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	420 Loft A-Floor	5/22/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	420 Field Blank	5/22/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	304 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	390	40 ug/ft2	Yes	Pending	
2	304 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	2800	250 ug/ft2	Yes	Pending	
3	304 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	1900	400 ug/ft2	Yes	Pending	
4	304 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	140	40 ug/ft2	Yes	Pending	
5	304 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	1500	250 ug/ft2	Yes	Pending	
6	304 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	3100	400 ug/ft2	Yes	Pending	
7	304 Rm. 2 D-Floor	5/26/2015	W. Laskey RA-029	33	40 ug/ft2	No	N/A	N/A
8	304 Rm. 3 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	304 Bath B-Floor	5/26/2015	W. Laskey RA-029	15	40 ug/ft2	No	N/A	N/A
10	304 Kitchen B-Floor	5/26/2015	W. Laskey RA-029	27	40 ug/ft2	No	N/A	N/A
11	304 Hall C-Floor	5/26/2015	W. Laskey RA-029	19	40 ug/ft2	No	N/A	N/A
12	304 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	302 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	3300	40 ug/ft2	Yes	Pending	
2	302 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	890	250 ug/ft2	Yes	Pending	
3	302 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	1500	400 ug/ft2	Yes	Pending	
4	302 Rm. 2 B Floor	5/26/2015	W. Laskey RA-029	910	40 ug/ft2	Yes	Pending	
5	302 Rm. 2 B-Int. Window Sill	5/26/2015	W. Laskey RA-029	970	250 ug/ft2	Yes	Pending	
6	302 Rm. 2 B-Ext. Window Well	5/26/2015	W. Laskey RA-029	190	400 ug/ft2	No	N/A	N/A
7	302 Rm. 3-Floor	5/26/2015	W. Laskey RA-029	170	40 ug/ft2	Yes	Pending	
8	302 Bath -Floor	5/26/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
9	302 Kitchen-Floor	5/26/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
10	302 Rm. 3 Int. Window Sill	5/26/2015	W. Laskey RA-029	420	40 ug/ft2	Yes	Pending	
11	302 Rm. 3 Ext. Window Well	5/26/2015	W. Laskey RA-029	340	40 ug/ft2	No	N/A	N/A
12	302 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	340 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	340 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	41	250 ug/ft2	No	N/A	N/A
3	340 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	490	400 ug/ft2	Yes	Pending	
4	340 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	17	40 ug/ft2	No	N/A	N/A
5	340 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	580	250 ug/ft2	Yes	Pending	
6	340 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	170	400 ug/ft2	No	N/A	N/A
7	340 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	340 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	340 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	340 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	340 Hall C-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	340 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	310 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	26	40 ug/ft2	No	N/A	N/A
2	310 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	340	250 ug/ft2	Yes	Pending	
3	310 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	950	400 ug/ft2	Yes	Pending	
4	310 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	73	40 ug/ft2	Yes	Pending	
5	310 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	670	250 ug/ft2	Yes	Pending	
6	310 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	1700	400 ug/ft2	Yes	Pending	
7	310 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	10	40 ug/ft2	No	N/A	N/A
8	310 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	310 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	310 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	310 Hall C-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	310 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	316 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	320	40 ug/ft2	Yes	Pending	
2	316 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	490	250 ug/ft2	Yes	Pending	
3	316 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	610	400 ug/ft2	Yes	Pending	
4	316 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	700	40 ug/ft2	Yes	Pending	
5	316 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	320	250 ug/ft2	Yes	Pending	
6	316 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	1000	400 ug/ft2	Yes	Pending	
7	316 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	316 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	316 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
10	316 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	316 Hall C-Floor	5/26/2015	W. Laskey RA-029	18	40 ug/ft2	No	N/A	N/A
12	316 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	338 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	66	40 ug/ft2	Yes	Pending	
2	338 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	1100	250 ug/ft2	Yes	Pending	
3	338 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	210	400 ug/ft2	No	N/A	N/A
4	338 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	110	40 ug/ft2	Yes	Pending	
5	338 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	380	250 ug/ft2	Yes	Pending	
6	338 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	750	400 ug/ft2	Yes	Pending	
7	338 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	36	40 ug/ft2	No	N/A	N/A
8	338 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	338 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	29	40 ug/ft2	No	N/A	N/A
10	338 Hall C-Floor	5/26/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
11	338 Hall A-Floor	5/26/2015	W. Laskey RA-029	24	40 ug/ft2	No	N/A	N/A
12	338 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	334 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	334 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	110	250 ug/ft2	No	N/A	N/A
3	334 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	310	400 ug/ft2	No	N/A	N/A
4	334 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	34	40 ug/ft2	No	N/A	N/A
5	334 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	130	250 ug/ft2	No	N/A	N/A
6	334 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	620	400 ug/ft2	Yes	Pending	
7	334 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	31	40 ug/ft2	No	N/A	N/A
8	334 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	334 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	334 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	334 Hall C-Floor	5/26/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
12	334 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	314 Rm. 1 A-Left Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	314 Rm. 1 A-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	71	250 ug/ft2	No	N/A	N/A
3	314 Rm. 1 A-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	240	400 ug/ft2	No	N/A	N/A
4	314 Rm. 1 A-Right Floor	5/26/2015	W. Laskey RA-029	84	40 ug/ft2	Yes	Pending	
5	314 Rm. 1 A-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	480	250 ug/ft2	Yes	Pending	
6	314 Rm. 1 A-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	510	400 ug/ft2	Yes	Pending	
7	314 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	27	40 ug/ft2	No	N/A	N/A
8	314 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	314 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	314 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	314 Hall C-Floor	5/26/2015	W. Laskey RA-029	13	40 ug/ft2	No	N/A	N/A
12	314 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	333 Rm. 1 C-Left Floor	5/26/2015	W. Laskey RA-029	150	40 ug/ft2	Yes	Pending	
2	333 Rm. 1 C-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	280	250 ug/ft2	Yes	Pending	
3	333 Rm. 1 C-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	1600	400 ug/ft2	Yes	Pending	
4	333 Rm. 1 C-Right Floor	5/26/2015	W. Laskey RA-029	26	40 ug/ft2	No	N/A	N/A
5	333 Rm. 1 C-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	85	250 ug/ft2	No	N/A	N/A
6	333 Rm. 1 C-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	550	400 ug/ft2	Yes	Pending	
7	333 Rm. 2 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	333 Rm. 3 B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	333 Bath D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	333 Kitchen D-Floor	5/26/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
11	333 Hall A-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	333 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	319 Rm. 3 C-Left Floor	5/26/2015	W. Laskey RA-029	180	40 ug/ft2	Yes	Pending	
2	319 Rm. 3 C-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	320	250 ug/ft2	Yes	Pending	
3	319 Rm. 3 C-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	540	400 ug/ft2	Yes	Pending	
4	319 Rm. 3 C-Right Floor	5/26/2015	W. Laskey RA-029	86	40 ug/ft2	Yes	Pending	
5	319 Rm. 3 C-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	500	250 ug/ft2	Yes	Pending	
6	319 Rm. 3 C-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	1100	400 ug/ft2	Yes	Pending	
7	319 Kitchen B-Floor	5/26/2015	W. Laskey RA-029	43	40 ug/ft2	Yes	Pending	
8	319 Bath B-Floor	5/26/2015	W. Laskey RA-029	41	40 ug/ft2	Yes	Pending	
9	319 Rm. 1 D-Floor	5/26/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
10	319 Rm. 2 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	319 Hall A-Floor	5/26/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
12	319 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	435 Rm. 3 C-Left Floor	5/26/2015	W. Laskey RA-029	39	40 ug/ft2	No	N/A	N/A
2	435 Rm. 3 C-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	230	250 ug/ft2	No	N/A	N/A
3	435 Rm. 3 C-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	390	400 ug/ft2	No	N/A	N/A
4	435 Rm. 3 C-Right Floor	5/26/2015	W. Laskey RA-029	13	40 ug/ft2	No	N/A	N/A
5	435 Rm. 3 C-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	210	250 ug/ft2	No	N/A	N/A
6	435 Rm. 3 C-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	940	400 ug/ft2	Yes	Pending	
7	435 Kitchen B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	435 Bath B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	435 Rm. 1 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	435 Rm. 2 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	435 Hall A-Floor	5/26/2015	W. Laskey RA-029	16	40 ug/ft2	No	N/A	N/A
12	435 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	331 Rm. 3 C-Left Floor	5/26/2015	W. Laskey RA-029	30	40 ug/ft2	No	N/A	N/A
2	331 Rm. 3 C-Left Int. Window Sill	5/26/2015	W. Laskey RA-029	500	250 ug/ft2	Yes	Pending	
3	331 Rm. 3 C-Left Ext. Window Well	5/26/2015	W. Laskey RA-029	910	400 ug/ft2	Yes	Pending	
4	331 Rm. 3 C-Right Floor	5/26/2015	W. Laskey RA-029	79	40 ug/ft2	Yes	Pending	
5	331 Rm. 3 C-Right Int. Window Sill	5/26/2015	W. Laskey RA-029	1000	250 ug/ft2	Yes	Pending	
6	331 Rm. 3 C-Right Ext. Window Well	5/26/2015	W. Laskey RA-029	810	400 ug/ft2	Yes	Pending	
7	331 Kitchen B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	331 Bath B-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	331 Rm. 1 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	331 Rm. 2 D-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	331 Hall A-Floor	5/26/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	331 Field Blank	5/26/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	411 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	30	40 ug/ft2	No	N/A	N/A
2	411 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	1200	250 ug/ft2	Yes	Pending	
3	411 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	780	400 ug/ft2	Yes	Pending	
4	411 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	100	40 ug/ft2	Yes	Pending	
5	411 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	620	250 ug/ft2	Yes	Pending	
6	411 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	1900	400 ug/ft2	Yes	Pending	
7	411 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	411 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	411 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
10	411 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	411 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	411 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	305 Rm. 2 C-Left Floor	5/27/2015	W. Laskey RA-029	6200	40 ug/ft2	Yes	Pending	
2	305 Rm. 2 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	450	250 ug/ft2	Yes	Pending	
3	305 Rm. 2 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	860	400 ug/ft2	Yes	Pending	
4	305 Rm. 2 C-Right Floor	5/27/2015	W. Laskey RA-029	770	40 ug/ft2	Yes	Pending	
5	305 Rm. 2 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	1200	250 ug/ft2	Yes	Pending	
6	305 Rm. 2 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	280	400 ug/ft2	Yes	Pending	
7	305 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	14	40 ug/ft2	No	N/A	N/A
8	305 Rm. 1 B-Floor	5/27/2015	W. Laskey RA-029	17	40 ug/ft2	No	N/A	N/A
9	305 Bath D-Floor	5/27/2015	W. Laskey RA-029	34	40 ug/ft2	No	N/A	N/A
10	305 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	90	40 ug/ft2	Yes	Pending	
11	305 Hall A-Floor	5/27/2015	W. Laskey RA-029	32	40 ug/ft2	No	N/A	N/A
12	305 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	347 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	347 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	73	250 ug/ft2	No	N/A	N/A
3	347 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	100	400 ug/ft2	No	N/A	N/A
4	347 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	30	40 ug/ft2	No	N/A	N/A
5	347 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	160	250 ug/ft2	No	N/A	N/A
6	347 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	810	400 ug/ft2	Yes	Pending	
7	347 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	347 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	347 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	347 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	347 Hall A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	347 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	344 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	344 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	180	250 ug/ft2	No	N/A	N/A
3	344 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	270	400 ug/ft2	No	N/A	N/A
4	344 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	20	40 ug/ft2	No	N/A	N/A
5	344 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	170	250 ug/ft2	No	N/A	N/A
6	344 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	69	400 ug/ft2	No	N/A	N/A
7	344 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	344 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	344 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	344 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	344 Hall C-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	344 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	303 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	300	40 ug/ft2	Yes	Pending	
2	303 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	910	250 ug/ft2	Yes	Pending	
3	303 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	930	400 ug/ft2	Yes	Pending	
4	303 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	300	40 ug/ft2	Yes	Pending	
5	303 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	1100	250 ug/ft2	Yes	Pending	
6	303 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	730	400 ug/ft2	Yes	Pending	
7	303 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	39	40 ug/ft2	No	N/A	N/A
8	303 Bath B-Floor	5/27/2015	W. Laskey RA-029	62	40 ug/ft2	Yes	Pending	
9	303 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	44	40 ug/ft2	Yes	Pending	
10	303 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	24	40 ug/ft2	No	N/A	N/A
11	303 Hall A-Floor	5/27/2015	W. Laskey RA-029	21	40 ug/ft2	No	N/A	N/A
12	303 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	327 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	100	40 ug/ft2	Yes	Pending	
2	327 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	100	250 ug/ft2	No	N/A	N/A
3	327 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	1200	400 ug/ft2	Yes	Pending	
4	327 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	55	40 ug/ft2	Yes	Pending	
5	327 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	88	250 ug/ft2	No	N/A	N/A
6	327 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	930	400 ug/ft2	Yes	Pending	
7	327 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
8	327 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	327 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	327 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	327 Hall A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	327 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	329 Rm. 2 C-Left Floor	5/27/2015	W. Laskey RA-029	69	40 ug/ft2	Yes	Pending	
2	329 Rm. 2 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	24	250 ug/ft2	No	N/A	N/A
3	329 Rm. 2 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	250	400 ug/ft2	No	N/A	N/A
4	329 Rm. 2 C-Right Floor	5/27/2015	W. Laskey RA-029	480	40 ug/ft2	Yes	Pending	
5	329 Rm. 2 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	60	250 ug/ft2	No	N/A	N/A
6	329 Rm. 2 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	1400	400 ug/ft2	Yes	Pending	
7	329 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	329 Rm. 1 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	329 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	329 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	329 Hall A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	329 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	434 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	59	40 ug/ft2	Yes	Pending	
2	434 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	160	250 ug/ft2	No	N/A	N/A
3	434 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	570	400 ug/ft2	Yes	Pending	
4	434 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	15	40 ug/ft2	No	N/A	N/A
5	434 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	160	250 ug/ft2	No	N/A	N/A
6	434 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	230	400 ug/ft2	No	N/A	N/A
7	434 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	434 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	434 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	434 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	434 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	434 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	320 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	690	40 ug/ft2	Yes	Pending	
2	320 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	370	250 ug/ft2	Yes	Pending	
3	320 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	690	400 ug/ft2	Yes	Pending	
4	320 Rm. 1 A-Right Floor (@ TV)	5/27/2015	W. Laskey RA-029	17	40 ug/ft2	No	N/A	N/A
5	320 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	1900	250 ug/ft2	Yes	Pending	
6	320 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	690	400 ug/ft2	Yes	Pending	
7	320 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	320 Rm. 3 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	320 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	320 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
11	320 Hall C-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	320 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	323 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	130	40 ug/ft2	Yes	Pending	
2	323 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	1000	250 ug/ft2	Yes	Pending	
3	323 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	700	400 ug/ft2	Yes	Pending	
4	323 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	260	40 ug/ft2	Yes	Pending	
5	323 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	360	250 ug/ft2	Yes	Pending	
6	323 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	1300	400 ug/ft2	Yes	Pending	
7	323 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
8	323 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	323 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	323 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	323 Hall A-Floor	5/27/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
12	323 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	342 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
2	342 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	57	250 ug/ft2	No	N/A	N/A
3	342 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	230	400 ug/ft2	No	N/A	N/A
4	342 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	33	40 ug/ft2	No	N/A	N/A
5	342 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	30	250 ug/ft2	No	N/A	N/A
6	342 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	670	400 ug/ft2	Yes	Pending	
7	342 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	342 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	342 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	342 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	342 Hall C-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	342 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	428 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	42	40 ug/ft2	Yes	Pending	
2	428 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	45	250 ug/ft2	No	N/A	N/A
3	428 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	850	400 ug/ft2	Yes	Pending	
4	428 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	100	40 ug/ft2	Yes	Pending	
5	428 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	530	250 ug/ft2	Yes	Pending	
6	428 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	530	400 ug/ft2	Yes	Pending	
7	428 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	428 Rm. 3 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	428 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	428 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	19	40 ug/ft2	No	N/A	N/A
11	428 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	428 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	442 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	18	40 ug/ft2	No	N/A	N/A
2	442 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	15	250 ug/ft2	No	N/A	N/A
3	442 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	300	400 ug/ft2	No	N/A	N/A
4	442 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	56	40 ug/ft2	Yes	Pending	
5	442 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	23	250 ug/ft2	No	N/A	N/A
6	442 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	860	400 ug/ft2	Yes	Pending	
7	442 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	442 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	442 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	442 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	442 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	442 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	405 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	34	40 ug/ft2	No	N/A	N/A
2	405 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	200	250 ug/ft2	No	N/A	N/A
3	405 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	1100	400 ug/ft2	Yes	Pending	
4	405 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
5	405 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	49	250 ug/ft2	No	N/A	N/A
6	405 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	210	400 ug/ft2	Yes	N/A	N/A
7	405 Rm. 1 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	405 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	405 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	405 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	405 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	405 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	436 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	74	40 ug/ft2	Yes	Pending	
2	436 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	140	250 ug/ft2	No	N/A	N/A
3	436 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	180	400 ug/ft2	No	N/A	N/A
4	436 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
5	436 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	1100	250 ug/ft2	Yes	Pending	
6	436 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	1300	400 ug/ft2	Yes	Pending	
7	436 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	436 Rm. 3 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	436 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	436 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	436 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	436 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	422 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	14	40 ug/ft2	No	N/A	N/A
2	422 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	66	250 ug/ft2	No	N/A	N/A
3	422 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	460	400 ug/ft2	Yes	Pending	
4	422 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	110	40 ug/ft2	Yes	Pending	
5	422 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	430	250 ug/ft2	Yes	Pending	
6	422 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	1300	400 ug/ft2	Yes	Pending	
7	422 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	422 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	422 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	422 Rm. 3 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	422 Loft C-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	422 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A
1	312 Rm. 1 A-Left Floor	5/27/2015	W. Laskey RA-029	76	40 ug/ft2	Yes	Pending	
2	312 Rm. 1 A-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	550	250 ug/ft2	Yes	Pending	
3	312 Rm. 1 A-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	370	400 ug/ft2	No	N/A	N/A
4	312 Rm. 1 A-Right Floor	5/27/2015	W. Laskey RA-029	25	40 ug/ft2	No	N/A	N/A
5	312 Rm. 1 A-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	290	250 ug/ft2	Yes	Pending	
6	312 Rm. 1 A-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	140	400 ug/ft2	Yes	Pending	
7	312 Rm. 2 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	312 Rm. 3 D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	312 Bath B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	312 Kitchen B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
11	312 Hall C-Floor	5/27/2015	W. Laskey RA-029	11	40 ug/ft2	No	N/A	N/A
12	312 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	429 Rm. 3 C-Left Floor	5/27/2015	W. Laskey RA-029	70	40 ug/ft2	Yes	Pending	
2	429 Rm. 3 C-Left Int. Window Sill	5/27/2015	W. Laskey RA-029	130	250 ug/ft2	No	N/A	N/A
3	429 Rm. 3 C-Left Ext. Window Well	5/27/2015	W. Laskey RA-029	1100	400 ug/ft2	Yes	Pending	
4	429 Rm. 3 C-Right Floor	5/27/2015	W. Laskey RA-029	240	40 ug/ft2	Yes	Pending	
5	429 Rm. 3 C-Right Int. Window Sill	5/27/2015	W. Laskey RA-029	46	250 ug/ft2	No	N/A	N/A
6	429 Rm. 3 C-Right Ext. Window Well	5/27/2015	W. Laskey RA-029	260	400 ug/ft2	Yes	N/A	N/A
7	429 Rm. 2 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
8	429 Rm. 1 B-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
9	429 Bath D-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
10	429 Kitchen D-Floor	5/27/2015	W. Laskey RA-029	30	40 ug/ft2	No	N/A	N/A
11	429 Loft A-Floor	5/27/2015	W. Laskey RA-029	<10	40 ug/ft2	No	N/A	N/A
12	429 Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

1	404 Rm. 1 A-Left Floor	5/30/2015	W. Laskey RA-029	60	40 ug/ft2	Yes	Pending	
2	404 Rm. 1 A-Left Int. Window Sill	5/30/2015	W. Laskey RA-029	210	250 ug/ft2			
3	404 Rm. 1 A-Left Ext. Window Well	5/30/2015	W. Laskey RA-029	140	400 ug/ft2			
4	404 Rm. 1 A-Right Floor	5/30/2015	W. Laskey RA-029	200	40 ug/ft2	Yes	Pending	
5	404 Rm. 1 A-Right Int. Window Sill	5/30/2015	W. Laskey RA-029	110	250 ug/ft2			
6	404 Rm. 1 A-Right Ext. Window Well	5/30/2015	W. Laskey RA-029	260	400 ug/ft2			
7	404 Kitchen D-Floor	5/30/2015	W. Laskey RA-029	24	40 ug/ft2			
8	404 Bath D-Floor	5/30/2015	W. Laskey RA-029	<10	40 ug/ft2			
9	404 Rm. 2 B-Floor	5/30/2015	W. Laskey RA-029	<10	40 ug/ft2			
10	404 Rm. 3 B-Floor	5/30/2015	W. Laskey RA-029	<10	40 ug/ft2			
11	404 Loft C-Floor	5/30/2015	W. Laskey RA-029	<10	40 ug/ft2			
12	404 Field Blank	5/30/2015	W. Laskey RA-029	<10	N/A			

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Apt. / Location	Date	Collected By	Result ug/ft2	Clearance Standard	Re-Clean Y/N	Cleaning /Re-Wipe Date	Result
1	Common Hallway: 3rd Fl. @ S Stair	5/27/2015	W. Laskey RA-029	140	40 ug/ft2	Yes	Pending	
2	Common Hallway: 3rd Fl. @ 349	5/27/2015	W. Laskey RA-029	59	40 ug/ft2	Yes	Pending	
3	Common Hallway: 3rd Fl. @ 345	5/27/2015	W. Laskey RA-029	53	40 ug/ft2	Yes	Pending	
4	Common Hallway: 3rd Fl. @ 340	5/27/2015	W. Laskey RA-029	96	40 ug/ft2	Yes	Pending	
5	Common Hallway: 3rd Fl. @ Elev	5/27/2015	W. Laskey RA-029	52	40 ug/ft2	Yes	Pending	
6	Common Hallway: 3rd Fl. @ 329	5/27/2015	W. Laskey RA-029	17	40 ug/ft2	Yes	N/A	N/A
7	Common Hallway: 3rd Fl. @ M Stair	5/27/2015	W. Laskey RA-029	28	40 ug/ft2	No	N/A	N/A
8	Common Hallway: 3rd Fl. @ 322	5/27/2015	W. Laskey RA-029	28	40 ug/ft2	No	N/A	N/A
9	Common Hallway: 3rd Fl. @ 309	5/27/2015	W. Laskey RA-029	15	40 ug/ft2	No	N/A	N/A
10	Common Hallway: 3rd Fl. @ 302	5/27/2015	W. Laskey RA-029	34	40 ug/ft2	No	N/A	N/A
11	Common Hallway: 3rd Fl. @ NE Stair	5/27/2015	W. Laskey RA-029	49	40 ug/ft2	Yes	Pending	
12	Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

1	Common Hallway: 4th Fl. @ S Stair	5/27/2015	W. Laskey RA-029	54	40 ug/ft2	Yes	Pending	
2	Common Hallway: 4th Fl. @ 449	5/27/2015	W. Laskey RA-029	22	40 ug/ft2	Yes	Pending	
3	Common Hallway: 4th Fl. @ 439	5/27/2015	W. Laskey RA-029	53	40 ug/ft2	Yes	Pending	
4	Common Hallway: 4th Fl. @ Elev	5/27/2015	W. Laskey RA-029	32	40 ug/ft2	Yes	Pending	
5	Common Hallway: 4th Fl. @ 432	5/27/2015	W. Laskey RA-029	13	40 ug/ft2	Yes	Pending	
6	Common Hallway: 4th Fl. @ M Stair	5/27/2015	W. Laskey RA-029	23	40 ug/ft2	Yes	N/A	N/A
7	Common Hallway: 4th Fl. @ 421	5/27/2015	W. Laskey RA-029	17	40 ug/ft2	No	N/A	N/A
8	Common Hallway: 4th Fl. @ 411	5/27/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
9	Common Hallway: 4th Fl. @ 407	5/27/2015	W. Laskey RA-029	18	40 ug/ft2	No	N/A	N/A
10	Common Hallway: 4th Fl. @ 402	5/27/2015	W. Laskey RA-029	12	40 ug/ft2	No	N/A	N/A
11	Common Hallway: 4th Fl. @ NE Stair	5/27/2015	W. Laskey RA-029	120	40 ug/ft2	Yes	Pending	
12	Field Blank	5/27/2015	W. Laskey RA-029	<10	N/A	No	N/A	N/A

CHAPTER 14: CLEANING

Cleaning: How To Do It

1. Include step-by-step procedures for precleaning, cleaning during the job, and daily and final cleanings in project design or specifications.
2. Assign responsibilities to specific workers for cleaning and for maintaining cleaning equipment.
3. Have sufficient cleaning equipment and supplies *before* beginning work.
4. If contamination is extensive, conduct precleaning of the dwelling unit. Move or cover all furniture and other objects.
5. Conduct ongoing cleaning during the job, including regular removal of large and small debris and dust. Decontamination of all tools, equipment, and worker protection gear is required before it leaves containment areas. Electrical equipment should be wiped and high-efficiency particulate air (HEPA) vacuumed, not wetted down, to minimize electrocution hazards.
6. Schedule sufficient time (usually 30 minutes to an hour) for a complete daily cleaning, starting at the same time near the end of each workday after lead hazard control activity has ceased.
7. For final cleaning, wait at least 1 hour after active lead hazard control activity has ceased to let dust particles settle.
8. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceilings, walls, trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
9. Wash all surfaces with a lead-specific detergent, high-phosphate detergent, or other suitable cleaning agent to dislodge any ground-in contamination, then rinse. Change the cleaning solution after every room is cleaned.
10. Repeat step 8. To meet clearance standards consistently, a HEPA vacuum, wet wash, and HEPA vacuum cycle is recommended. For interim control projects involving dust removal only, the final HEPA vacuuming step is usually not needed (see Chapter 11). Other cleaning methods are acceptable, as long as clearance criteria are met and workers are not overexposed.
11. After final cleaning, perform a visual examination to ensure that all surfaces requiring lead hazard control have been addressed and all visible dust and debris have been removed. Record findings and correct any incomplete work. This visual examination should be performed by the owner or an owner's representative who is independent of the lead hazard control contractor.
12. If other construction work will disturb the lead-based paint surfaces, it should be completed at this point. If those surfaces are disturbed, repeat the final cleaning step after the other construction work has been completed.
13. Paint or otherwise seal treated surfaces and interior floors.
14. Conduct a clearance examination (see Chapter 15).
15. If clearance is not achieved, repeat the final cleaning.

Step-by-Step Summary (continued)

16. Continue clearance testing and repeated cleaning until the dwelling achieves compliance with all clearance standards. As an incentive to conduct ongoing cleaning and a thorough final cleaning, the cost of repeated cleaning after failing to achieve clearance should be borne by the contractor as a matter of the job specification, not the owner.
17. Do not allow residents to enter the work area until cleaning is completed and clearance is established.
18. Cleaning equipment list:
    - HEPA vacuums.
    - Detergent.
    - Waterproof gloves.
    - Rags.
    - Sponges.
    - Mops.
    - Buckets.
    - HEPA vacuum attachments (crevice tools, beater bar for cleaning rugs).
    - 6-mil plastic bags.
    - Debris containers.
    - Waste water containers.
    - Shovels.
    - Rakes.
    - Water-misting sprayers.
    - 6-mil polyethylene sheeting (or equivalent).

Chapter 14: Cleaning

I. Introduction

This chapter describes cleaning procedures to be employed following abatement and interim control work. Dust removal as an interim control measure is covered in Chapter 11.

All lead hazard control activities can produce dangerous quantities of leaded dust. Unless this dust is properly removed, a dwelling unit will be more hazardous after the work is completed than it was originally. Once deposited, leaded dust is difficult to clean effectively. Whenever possible, ongoing and daily cleaning of leaded dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures.

Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead-based paint hazards in a dwelling unit will not make the unit safe unless excessive levels of leaded dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.

A. Performance Standard

Although the cleaning methods described in this chapter are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both residents and workers.

B. Small Dust Particles

Dust particles that are invisible to the naked eye remain on surfaces after ordinary cleaning procedures. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures.

C. Difficulties in Cleaning

While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail.

Several common reasons for this failure include low clearance standards, worker inexperience, high dust-producing methods, and deadlines.

1. Low Clearance Standards

Because very small particles of leaded dust are easily absorbed by the body when ingested or inhaled, a small amount can create a health hazard for young children. Therefore, "clearance standards" are extremely low for acceptable levels of leaded dust particles on surfaces after hazard control activities, and careful cleaning procedures are required. Although it is not possible to remove *all* leaded dust from a dwelling, it is possible to reduce it to a safe level.

Clearance standards are described more fully in Chapter 15. The permissible amount of leaded dust remaining on each of the following surfaces following lead hazard work is as follows:

- 100 $\mu g/ft^2$ on floors.
- 500 $\mu g/ft^2$ on interior window sills (stools).
- 800 $\mu g/ft^2$ on window troughs (the area where the sash sits when closed).
- 800 $\mu g/ft^2$ on exterior concrete.

These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied after the completion of a lead paint hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.

2. Worker Inexperience

To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.

3. High Dust-Producing Methods and/or Inadequate Containment

High dust-generating methods, inadequate containment during hazard control work, and poor work practices can all make achievement of clearance particularly difficult. Work practices necessary to prevent spreading of dust throughout a dwelling (e.g., by tracking dust out of work areas) are essential but sometimes tedious. Essential work practices are sometimes mistakenly considered to be "flexible guidelines" rather than necessary standards that are designed to ensure that the job is completed, not only safely, but also on time and within budget.

4. Deadlines

Daily and final cleanings have sometimes been compromised due to project deadlines, since cleaning comes at the end of the job. Hurried efforts often result in clearance failure. Delayed and over-budget hazard control projects are often the result of repeated, unplanned recleanings that are necessitated by inadequate containment and sloppy work practices.

II. Coordination of Cleaning Activities

A. Checklist

The owner or contractor may use the following cleaning checklist before any lead hazard control activity:

- ✓ Is the critical importance of cleaning in a hazard control project understood?
- ✓ Have all workers been trained and certified for hazard control work?
- ✓ Have the precleaning, daily, and final cleanings been scheduled properly and coordinated with the other participants in the hazard control process?
- ✓ Have cleaning equipment and materials been obtained?
- ✓ Do the workers know how to operate and maintain special cleaning equipment, and do they have directions for the proper use of all cleaning materials?
- ✓ Have all workers carefully studied the step-by-step procedures for precleaning (if needed), in-progress cleaning, and daily and final cleanings?
- ✓ Are all workers properly protected during the cleaning processes (see Chapter9)?
- ✓ Have provisions been made to properly contain and store potentially hazardous debris (see Chapter 10)?
- ✓ Have dust-clearance testing and related visual inspections been arranged (see Chapter 15)?
- ✓ Are the clearance criteria to be met fully understood?
- ✓ Have all appropriate surfaces been properly painted or otherwise sealed?
- ✓ Have appropriate records been maintained that document participants' roles in the hazard control project?

B. Equipment Needed for Cleaning

The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice tools, beater bar for cleaning rugs), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).

C. Waste Disposal

Regulations governing hazardous and nonhazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.

III. Cleaning Methods and Procedures

Many of the special cleaning methods and procedures detailed in this chapter are not standard operating procedure for general home improvement contractors. Therefore, project designers, responsible agencies, or owners must ensure that contractors follow the methods and procedures recommended herein or specially designed alternative procedures, even though some may appear to be redundant and unnecessary. These methods have been shown to be feasible and effective in many situations and skipping steps in the cleaning procedures can be counterproductive.

A. Containment

Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containment or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area (see Chapter 8).

B. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques

Because leaded dust adheres tenaciously, especially to such rough or porous materials as weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time.

Two basic cleaning methods have proven effective, when used concurrently, in lead-based paint hazard control projects: a special vacuum cleaner equipped with a HEPA exhaust filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum.

Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the "Alternatives Methods" section in this chapter, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.

1. HEPA Vacuuming

HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small, micron-sized particles. These filters can remove particles of 0.3 microns or greater from air at 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is capable of filtering out particles of 0.13 microns or greater at 99.9995 percent efficiency. However, these ULPA filters are slightly more expensive, and may be less available than HEPA filters.

Vacuuming with conventional vacuum machines is unlikely to be effective, because much of the fine dust will be exhausted back into the environment where it can settle on surfaces. A recent Canadian study revealed that fine-dust air levels were exceedingly high when a standard portable vacuum with a new bag was used, although partially filled bags were found to be more efficient (CMHC, 1992). Considerations for the proper use of a HEPA vacuum are listed below.

Operating Instructions

There are a numerous manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, the manufacturer's operating instructions should be carefully followed and if possible, training sessions arranged with the manufacturer's representative.

Although HEPA vacuums have the same "suction" capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.

Special Attachments

Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces—such as brushes of various sizes, crevice tools, and angular tools.

Selecting Appropriate Size(s)

HEPA vacuums are available in numerous sizes, ranging from a small lunchbucket-sized unit to track-mounted systems. Two criteria for size selection are the size of the job and the type of electrical power available. Manufacturer recommendations should be followed.

Wet-Dry HEPA Vacuums

Some hazard control contractors have found the wet-dry HEPA vacuums to be particularly effective in meeting clearance standards. These vacuums are equipped with a special shut-off float switch to protect the electrical motor from water contact.

Prefilters

HEPA filters are usually used in conjunction with a prefilter or series of prefilters that trap the bulk of the dust in the exhaust airstream, particularly the larger particles. The HEPA filter traps most of the remaining small particles that have passed through the prefilter(s). All filters must be maintained and replaced or cleaned as specified in the manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change prefilters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

HEPA Vacuuming Procedures

Surfaces frequently vacuumed include ceilings, walls, floors, windows, interior and exterior sills, doors, heating, ventilation, and air conditioning (HVAC) equipment (heating diffusers, radiators, pipes, vents), fixtures of any kind (light, bathroom, kitchen), built-in cabinets, and appliances.

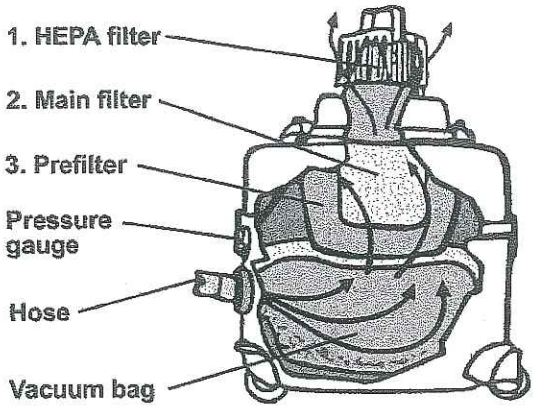
To aid in dislodging and collecting deep dust and lead from carpets, the HEPA vacuum must be equipped with a beater bar (agitator head) that is fixed to the cleaning head. This bar should be used on all passes on the carpet face during dry vacuuming (see Chapter 11 for details on carpet and furniture cleaning).

All rooms and surfaces should be included in the HEPA vacuum process, except for those that (1) were found not to have lead-paint hazards *and* were properly separated from work areas before the process began (see Chapter 8), or (2) were never entered during the process. Porches, sidewalks, driveways, and other exterior surfaces should be vacuumed if exterior hazard control work was conducted, or if debris was stored or dropped outside. Vacuuming should begin on the ceilings and end on the floors, sequenced to avoid passing through rooms already cleaned, with the dwellings' entryway cleaned last.

Emptying the HEPA Vacuum

Used filters and vacuumed debris are potentially hazardous waste and should be treated accordingly (see Chapter10). Therefore, operators should use extreme caution when opening the HEPA vacuum for filter replacement or debris removal to avoid accidental release of accumulated dust into the environment. This may occur, for example, if the vacuum's seal has been broken and the vacuum's bag is disturbed.

Figure 14.1a Vacuum With a HEPA Filter.



Parts of a HEPA-vacuum

Most HEPA-vacuums have three filters: HEPA filter, main filter, and prefilter. Debris gets sucked in through the hose into the vacuum bag. The air and dust get filtered through the prefilter, the main filter, and the HEPA filter. The HEPA filter captures the lead dust before the air is released into the work area again.

Operators should also wear a full set of protective clothing and equipment, including appropriate respirators, when performing this maintenance function, which should be done in the containment area or offsite.

2. Wet Detergent Wash

Several types of detergents have been used to remove leaded dust. Those with a high-phosphate content (containing at least 5 percent trisodium phosphate, also known as TSP) have been found to be effective when used as part of the final cleaning process (Millar, 1982). TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some States have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high-TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control.

Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several

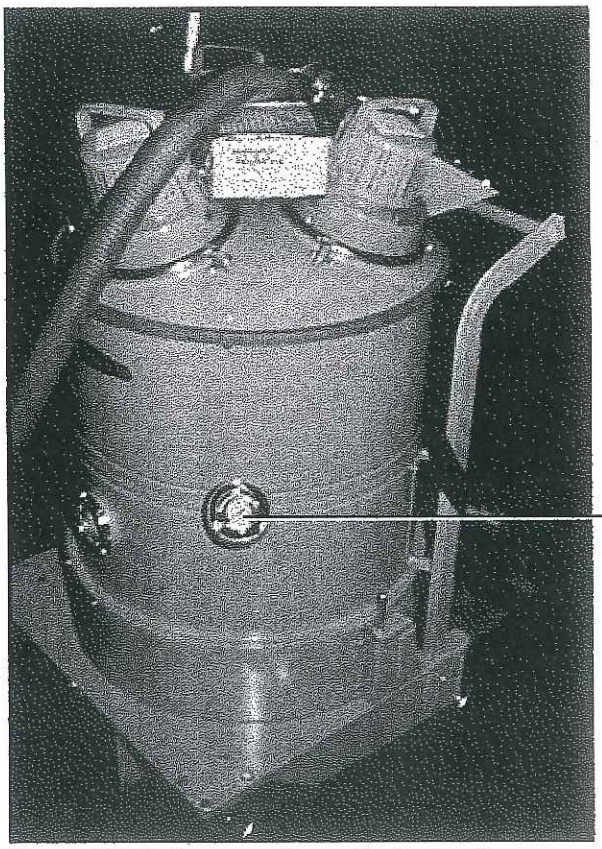
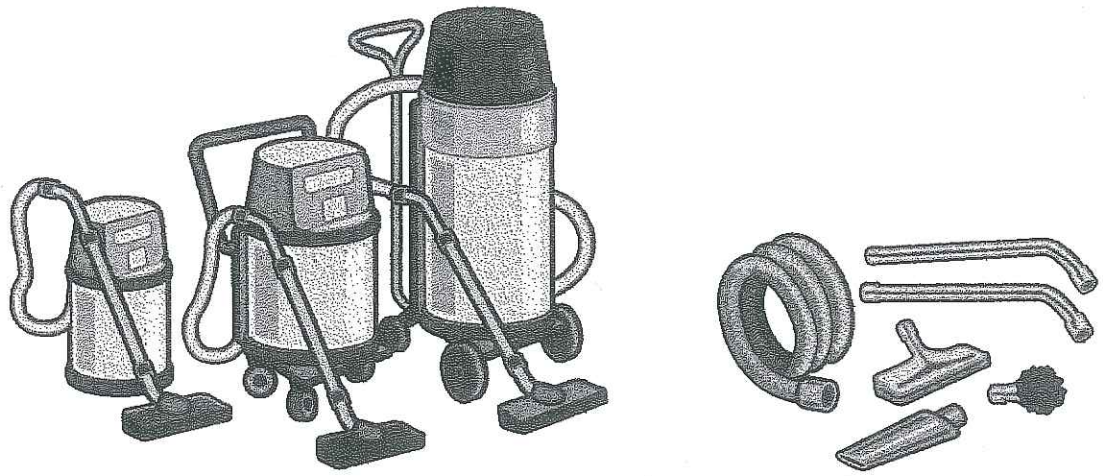


Figure 14.1b Pressure Gauge Indicator Shows When Filters Require Changing.

Figure 14.2 HEPA Vacuum Sizes and Tools.



investigators (Grawe, 1993; Wilson, 1993) and may also be safer, since TSP is a skin and eye irritant. See section VII for more information on non-TSP detergents. Proper procedures for using high-phosphate detergents also apply to most other types of detergents and include the following steps:

Manufacturer's Dilution Instructions

Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities should be located in or very near the work area. Consult manufacturer's directions for the use of other detergents.

Appropriate Cleaning Equipment

Because a detergent may be used to clean leaded dust from a variety of surfaces, several types of application equipment are needed, including cleaning solution spray bottles, wringer buckets, mops, variously sized hand sponges, brushes, and rags. Using the proper equipment on each surface is essential to the quality of the wet-wash process.

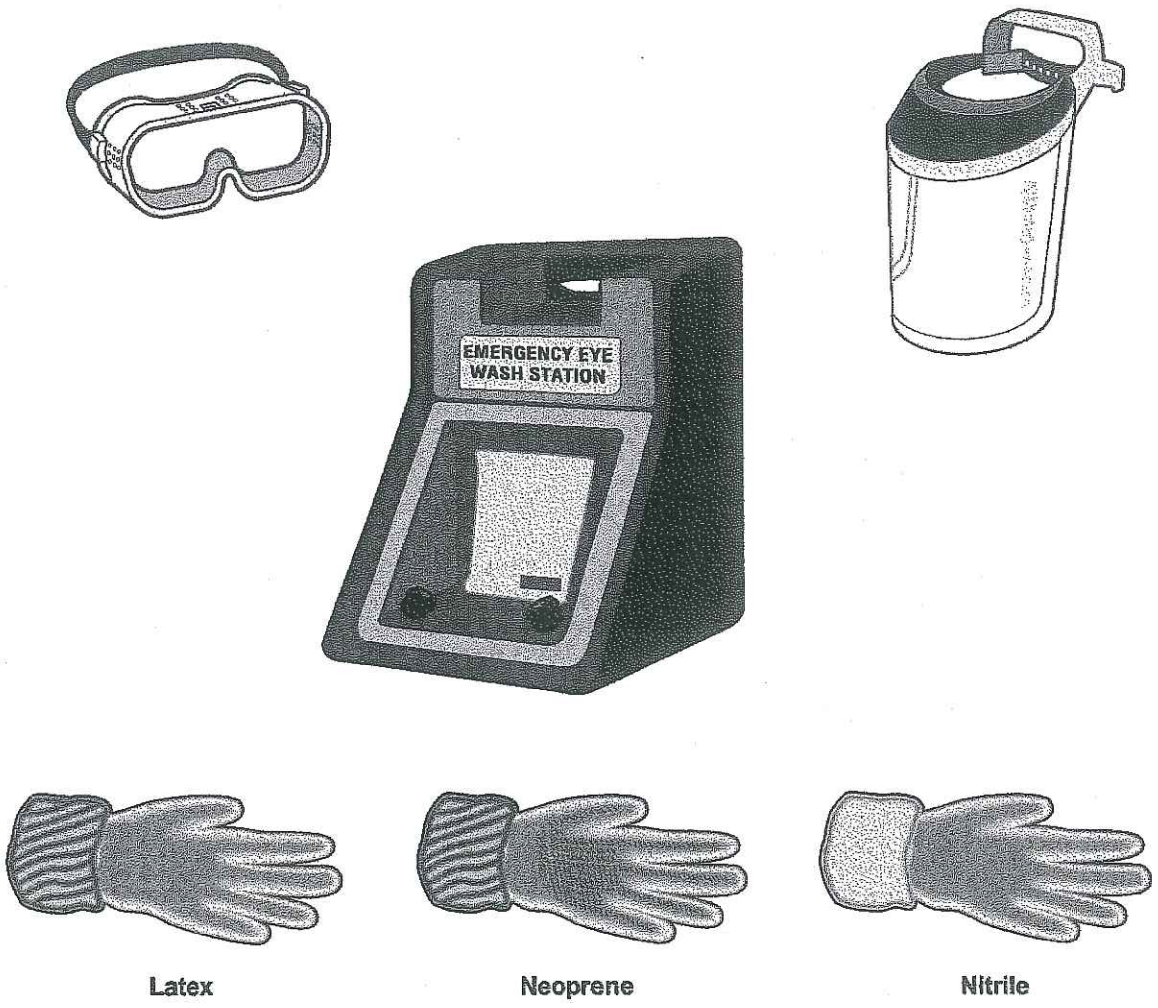
Proper Wet-Cleaning Procedures

At the conclusion of the active lead hazard control process and the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and sequenced to avoid passing through rooms already cleaned.

Changing Cleaning Mixture

Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface-area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no

Figure 14.3 Goggles, Face Shields, Gloves, and Eye Wash Facilities Should Be Available When Used With Chemicals Such as TSP.



more than 1,000 square feet. Used cleaning mixture is potentially hazardous waste (see Chapter 10); consult with your local water and sewage utility for directions on its proper disposal. Wash water should never be poured onto the ground. The wash water is usually filtered and then poured down a toilet (if the local water authority approves).

3. The HEPA/Wet Wash/HEPA Cycle

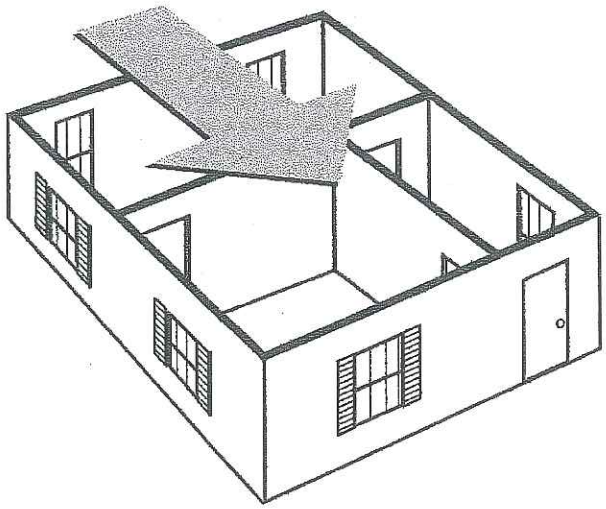
Typical Procedures

The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows:

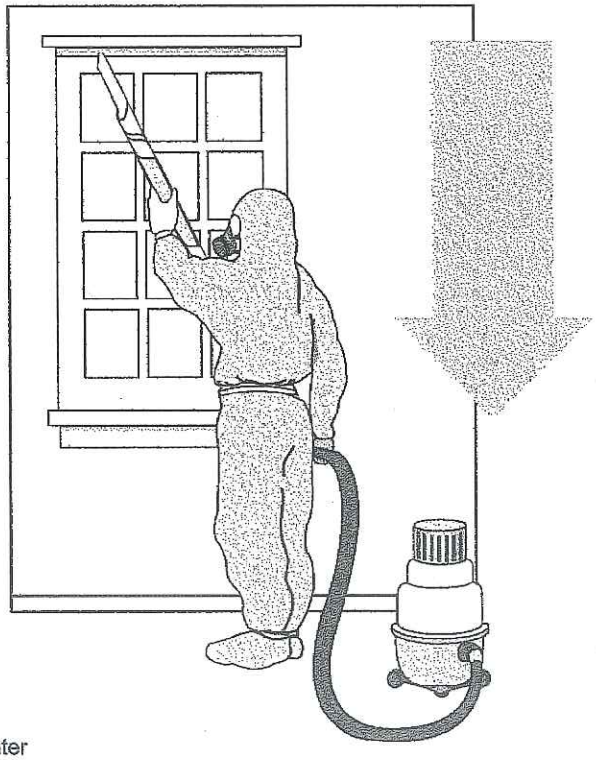
- First, the area is HEPA vacuumed.

Figure 14.4a The HEPA Vacuum, Wet Wash, HEPA Vacuum Cycle Helps in Meeting Clearance Standards.

HEPA vacuum all surfaces
Start at the end farthest from the main entrance/exit. As you vacuum, move towards the main exit and finish there.



Begin at the top of each room and work down. For example, start with the top shelves, the top of the woodwork, and so on, and work down to the floor. Do every inch of the windows, especially the window troughs.



Courtesy: Alice Hamilton Occupational Health Center

- Next, the area is washed down.
- After drying, the area is again HEPA vacuumed.

The rationale for this three-pass system is as follows:

- The first HEPA vacuum removes as much dust and remaining debris as possible.
- The wet wash further dislodges dust from surfaces.
- The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.

Single-Pass Wet Wash/HEPA Vacuum

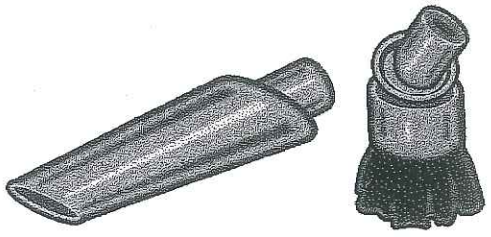
Some lead hazard control contractors have found HEPA spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.

Figure 14.4b (continued)

Use special attachments
Use the rubber cone where the floor meets the baseboard and along all the cracks in the floor boards. Use the brush tool for walls and woodwork.

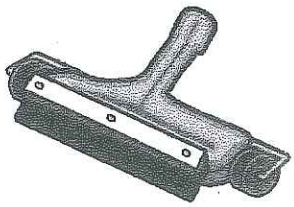
Use the wheeled floor nozzle for bare floors and the carpet beater for rugs.

Move slowly
Vacuum slowly so the HEPA vacuum can pick up all the lead dust.



Rubber Cone **Dust Brush**

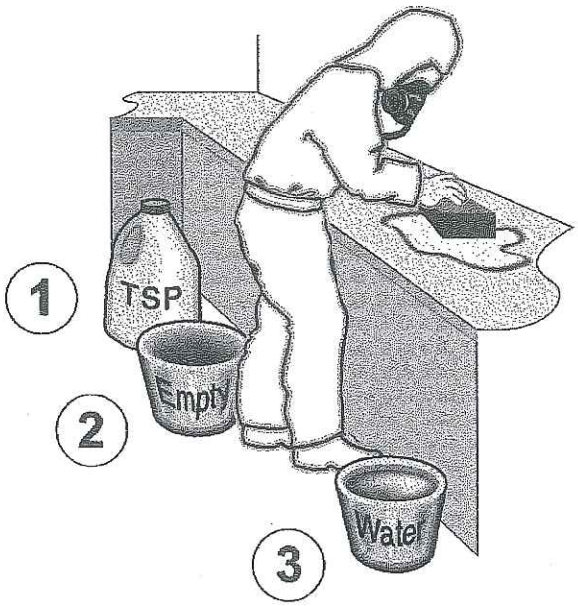
Powered Carpet Beater



Wheeled Floor Nozzle

Figure 14.4c (continued)

Wash all surfaces with suitable detergents
Wash *all surfaces* in the work area with suitable detergents, including areas that had been covered with plastic. Some wallpaper should only be HEPA vacuumed, since it may be damaged by the detergent.



Wipe All Surfaces

Wet Mop Floor

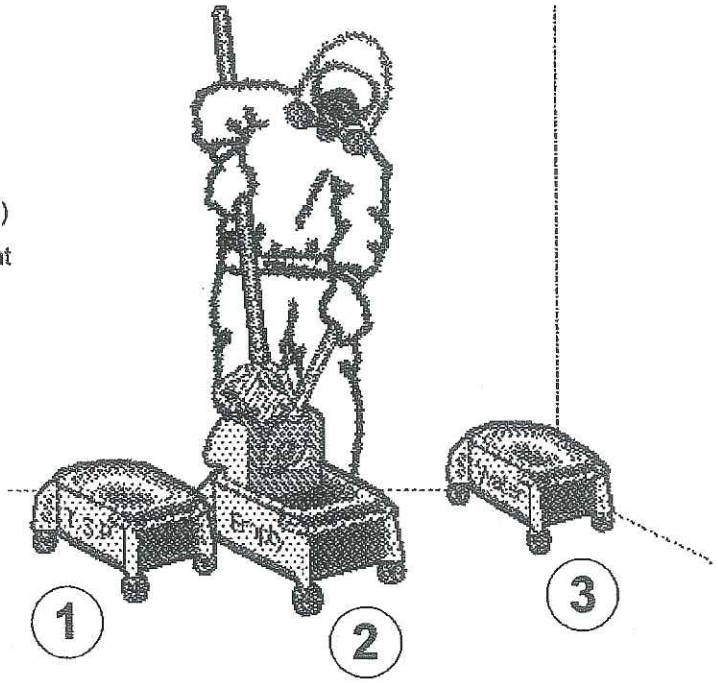
Don't Dry Sweep

Figure 14.4c (continued)

Use the 3-Bucket System.

To wash: Use string mops and mop buckets with wringers. (Some experts say NEVER use a sponge mop on the floor. Sponge mops may only push the lead around on the floor, not remove it.)

Dip the string mophead in the detergent wash in bucket #1. Mop the floor.



Squeeze out the mophead in empty bucket #2. Return to bucket #1 for more detergent solution and continue mopping. Repeat.

Use the third bucket for rinsing the floor.

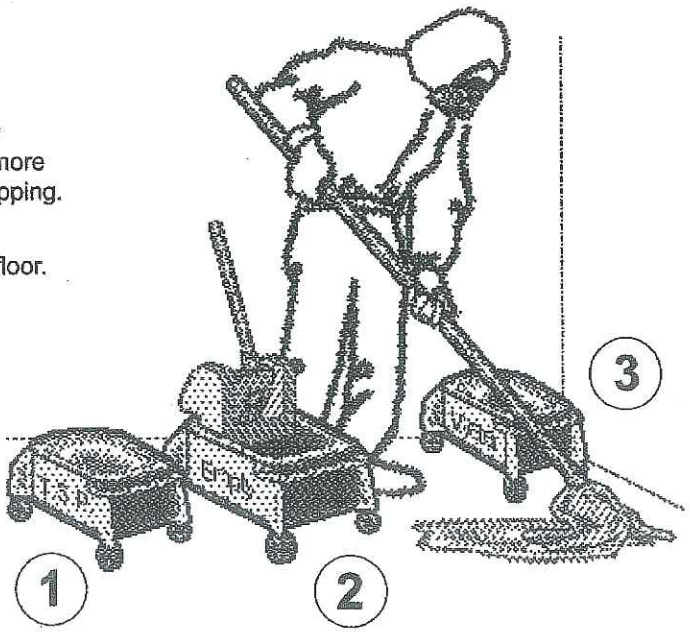
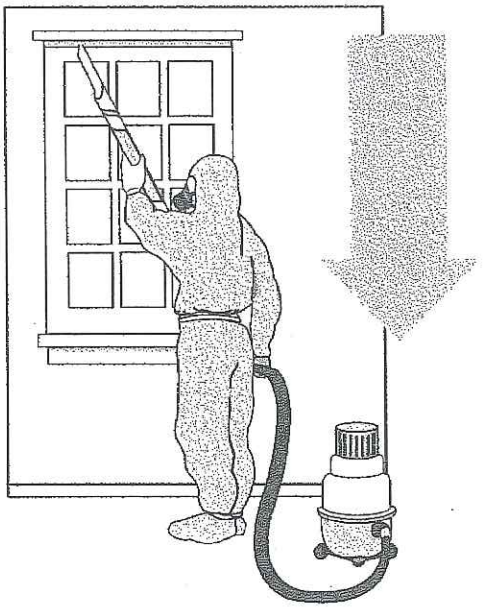


Figure 14.4d (continued)

HEPA vacuum all surfaces a final time
HEPA vacuum *all surfaces* in the work area, including areas that had been covered with plastic.

Starting at the far end, work towards the decontamination area. Begin with ceilings or the top of the walls and work down, cleaning the floors last. Do every inch of the windows, especially the troughs. Use the corner tool to clean where the floor meets the baseboard and all the cracks in the floor boards. Use the brush tool for the walls. Move slowly and carefully to get all the dust.



4. Sealing Floors

Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier for residents to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or painted with deck enamel or durable paint. Vinyl tile, linoleum, and other similar floors should be sealed with an appropriate wax. Concrete floors should be sealed with a concrete sealer or other type of concrete deck enamel. However, if these floors are already covered by an effective coat of sealant, it may be possible to skip this step.

As an alternative to sealing, floors may be covered with new vinyl tile, sheet vinyl, linoleum flooring, or the equivalent to create a more permanent cleanable surface. New surfaces should be cleaned with a cleaning solution that is appropriate for that type of surface.

IV. Order of Cleaning Procedures During Lead Hazard Control

The special cleaning procedures to be followed during a lead-based paint hazard control project are discussed in chronological order below. Skipping steps in the process may result in failure to meet post-lead hazard control clearance standards.

A. Precleaning Procedures

Precleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in dwelling units that are heavily contaminated with paint chips. Precleaning involves the removal of large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant personal possessions, furniture, or carpeting, depending on the

Figure 14.5 Single-Pass HEPA Vacuum/Wet Wash Technology.

Worksite Preparation Level selected (see Chapter 8). If the furniture will not be cleaned, it should be removed from the area or covered with plastic prior to beginning the precleaning procedure. Carpeting should always be misted before its removal to control the generation of hazardous dust.

It is usually the resident's responsibility to remove most of his or her personal possessions. However, if necessary, owners or project management should be prepared to complete this activity before lead hazard control work begins. As a last resort, the contractor may pack any remaining belongings and carefully seal and move the boxes, supplying all necessary boxes, packing materials, and staff to complete the task. Following cleaning and clearance, the contractor should return all packed items to their appropriate places. Leaving these tasks to the contractor may be expensive and inefficient, since the contractor will need to be insured for this function if the occupant's

Figure 14.6 Precleaning Is Needed in Areas Where Contamination and Deterioration Are High.

belongings are damaged. Additionally, moving furniture, rugs, drapes, and other items owned by the occupant could increase leaded dust levels. Clearance should be conducted after cleaning but before resident items are moved back in.

B. Ongoing Cleaning During the Job

Periodic HEPA vacuuming during the lead hazard control work may be necessary to minimize tracking of dust and paint chips from one area to another (e.g., when a large amount of paint chips or dust is being generated).

C. Daily Cleaning Procedures

Cleaning activity should be scheduled at the end of each workday when all active lead hazard control throughout the dwelling has ceased. Sufficient time must be allowed for a thorough and complete cleaning (usually about 30 minutes to an hour). Daily cleaning helps achieve clearance dust levels by minimizing problems that may otherwise occur during final cleaning and limiting worker exposures. While daily cleaning can be skipped in vacant dwelling units, it is required when occupants will return in the evening. Under no circumstances should debris or plastic be left outside overnight in an unsecured area, even if the dwelling is vacant. Daily cleaning should consist of:

- Removing large debris.
- Removing small debris.
- HEPA vacuuming, wet clean, HEPA vacuuming (horizontal surfaces only).
- Cleaning exterior.
- Patching and repairing plastic sheeting.
- Securing debris/plastic.

Figure 14.7 Plastic Sheeting Should Be Repaired as Part of Daily Cleanup.

1. Large Debris

Large demolition-type debris (e.g., doors, windows, trim) should be wrapped in 6-mil plastic, sealed with tape, and moved to a secure area on the property designated for waste storage. All sharp corners, edges, and nails should be hammered down to prevent injury and minimize the tearing of plastic. It is not necessary to wrap each individual piece of debris in plastic if the entire load can be wrapped. A secure area either outside or inside the property must be designated as a temporary waste-storage area. Covered, secured, and labeled dumpsters placed on or near the property may be used. Proper segregation of waste should be enforced at this time (see Chapter 10).

2. Small Debris

After being misted with water, small debris should be swept up, collected, and disposed of properly. The swept debris should be placed in double 4-mil or single 6-mil polyethylene (or equivalent) plastic bags, properly sealed, and moved to the designated trash storage area. Trash bags should not be overloaded; overloaded bags may rupture or puncture during handling and transport.

3. Exterior Cleaning

Areas potentially affected by exterior lead hazard control should be protected via a containment system (see Chapter 8). Because weather can adversely affect the efficacy of exterior

containment, the surface plastic of the containment system should be removed at the end of each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6-mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming is appropriate for hard exterior surfaces, not soil.

4. Worker Protection Measures

General worker protection measures are discussed in Chapter 9. Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment, especially appropriate respirators.

5. Maintaining Containment

The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should monitor the sheeting and immediately repair any holes or rips with 6-mil plastic and duct tape.

V. Order of Final Cleaning Procedures After Lead Hazard Control

Before treated surfaces can be painted or sealed, final cleaning procedures must be completed. Because airborne dust requires time to settle, the final cleaning process should start no sooner than 1 hour after active lead hazard control has ceased in the room. See Appendix 11 for details regarding dust settling.

A. Final Cleaning

As the first stage in the final cleaning, floor plastic should be misted and swept as detailed earlier in this chapter. Upper-level plastic, such as that on cabinets and counters, should be removed first, after it has been misted with water *and cleaned*. All plastic should be folded carefully from the corners/ends to the middle to trap any remaining dust. Next, remove both layers of plastic from the floor.

Plastic sheets used to isolate contaminated rooms from noncontaminated rooms should remain in place until after the cleaning and removal of other plastic sheeting; these sheets may then be misted, cleaned, and removed last.

Removed plastic should be placed into double 4-mil or single 6-mil plastic bags, or plastic bags with equivalent (or better) performance characteristics, which are sealed and removed from the premises. As with daily cleanings, this plastic-removal process usually requires workers to use protective clothing and respirators.

After the plastic has been removed from the contaminated area, the entire area should be cleaned using the HEPA/wet wash/HEPA cycle, starting with the ceiling and working down to the floor. After surfaces are repainted or sealed, a final HEPA/wet wash/HEPA cycle may be necessary if accumulated dust caused by other work is visible.

1. Decontamination of Workers, Supplies, and Equipment

Decontamination is necessary to ensure that worker's families, other workers, and subsequent properties do not become contaminated. Specific procedures for proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas should be implemented, as described below and in Chapters 9 and 10.

Work clothing, work shoes, and tools should not be placed in a worker's automobile unless they have been laundered or placed in sealed bags. All vacuums and tools that were used should be wiped down using sponges or rags with detergent solutions.

Consumable/disposable supplies, such as mop heads, sponges, and rags, should be replaced, after each dwelling is completed. Soiled items should be treated as contaminated debris (see Chapter 10).

Figure 14.8a Pick Up Corners of Plastic Sheeting.

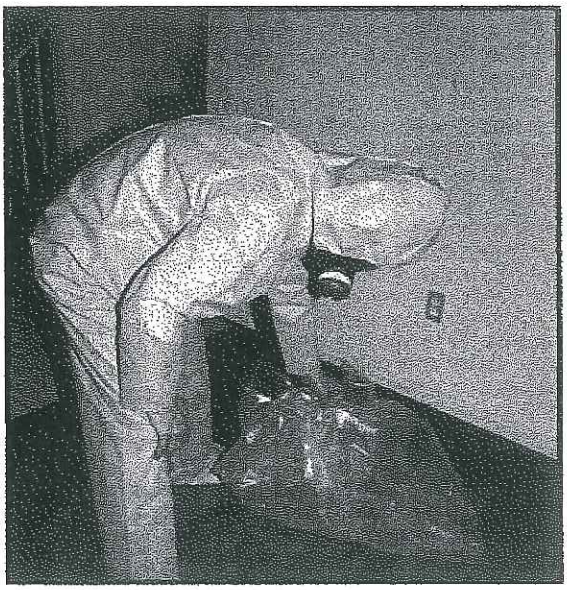


Figure 14.8b Fold Plastic Inward.

Durable equipment, such as power and hand tools, generators, and vehicles, should be cleaned prior to their removal from the site; the cleaning should consist of a thorough HEPA vacuuming followed by washing.

B. Preliminary Visual Examination

After the preliminary final cleaning effort is completed, the certified supervisor should visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. While the preliminary examination may be performed by the lead hazard control supervisor, contractor, or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance.

If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or recleaned. Therefore, it is more cost effective to have the supervisor rather than the clearance examiner perform this initial examination.

C. Surface Painting or Sealing of Nonfloor Surfaces

The next step of the cleaning process is painting or otherwise sealing all treated surfaces except floors.

Surfaces, including walls, ceilings, and woodwork, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision.

D. Final Inspection

The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work is complete, 2) to detect the presence of leaded dust, and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the sealant is applied to the floor. See Chapter 15 for information on clearance examination procedures.

E. Recleaning After Clearance Failure

If after passing the final visual examination, the dwelling unit fails the clearance wipe dust tests,

the HEPA/wet wash/HEPA cleaning cycle should be carefully and methodically repeated. Failure is an indication that the cleaning has not been successful. Recleaning should be conducted under the direct supervision of a certified supervisor. Care should be exercised during the recleaning of "failed" surfaces or components to avoid recontaminating "cleared" surfaces or components.

VI. Cleaning Cost Considerations

An important consideration in determining lead hazard control strategies and methods is the cost and difficulty of required daily and final cleanup operations and the ease with which one can meet dust-clearance standards. A general rule of thumb is that lead hazard control strategies that generate the most dust will have higher cleanup costs and higher initial clearance test-failure rates.

A. Initial Clearance Test Failure Rates

The likelihood of passing final dust-clearance tests is highly correlated with the chosen intervention strategy, methods, and care exercised by the contractor. For example, in one study (HUD, 1991) initial wipe-test failure rates were 14 percent for interior window sills, 19 percent for floors, and 33 percent for window troughs. The pass/fail rates for each surface were strongly associated with the dwelling unit abatement strategy employed. Chemical removal and hand-scraping strategies experi-enced higher failure rates than replacement and encapsulation/enclosure strategies (see Table 14.1).

However, results of the HUD demonstration project indicated that clearance failure is not solely related to abatement method. The report stated that "the diligence and effectiveness of an abatement contractor's cleaning process ... had a major impact on ... the likelihood of the dwelling unit to pass the final wipe test clearance" (HUD, 1991).

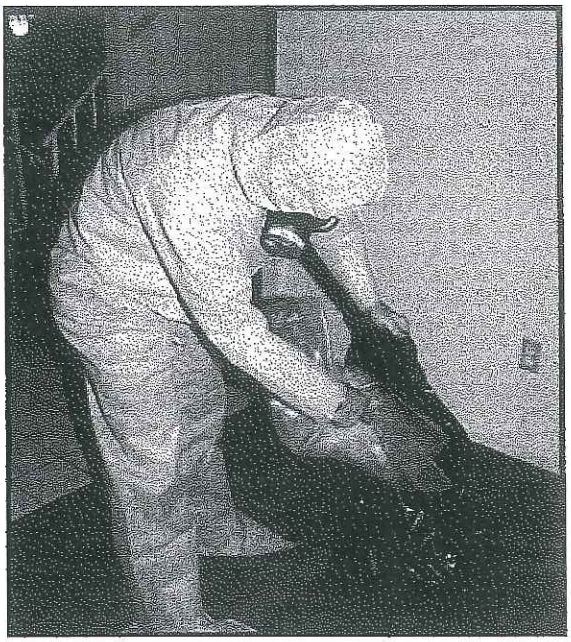


Figure 14.8c Dispose of Plastic Sheeting in a Plastic Trash Bag.

B. Key Factors In Effective Cleaning

Effective cleaning will be aided by adequate sealing of surfaces with polyethylene sheeting prior to lead hazard control, proper daily cleaning practices, good worker training, and attention to detail. Where poor worksite preparation is employed, additional cleaning may be required to meet clearance.

C. Special Problems

Surfaces such as porous concrete, old porous hardwood floors, and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve an acceptable level of cleanliness.

The lead hazard control strategy of enclosure is frequently chosen for window troughs and for old porous hardwood floors due to the difficulty of adequately cleaning these surfaces. This

option provides not only a clean surface but a more permanently cleanable surface for dwelling occupants to maintain.

VII. Alternative Methods

Alternatives to the recommended cleaning tools and practices discussed in this chapter are available, some having significant potential for increasing effectiveness and lowering costs.

A recent Canadian study (CMHC, 1992) evaluated the effectiveness of contaminated dust cleanup activities using tools that would generally be available to construction contractors and homeowners. Vinyl flooring and carpeting were cleaned using several wet/dry vacuuming systems, sweeping, and wet mopping. The study found that regular vacuums with empty bags send a steady stream of fine particles into the air, while vacuums with partially filled bags were more efficient. This finding suggests the necessity for HEPA vacuums. Other vacuums may be used if workers do not experience increased exposures, if compliance with clearance standards is achieved, and if a variance from OSHA regulation (29 CFR 1926.62 (h)(4)) is obtained by the contractor or employer (if required).

Agitator heads on vacuums were demonstrated to significantly enhance vacuum effectiveness on carpets in cleaning up fine dust without increasing airborne dust levels. Table 14.2 suggests that a central vacuum with an agitator head is most efficient at removing dust and minimizing recontamination, probably because the vacuum exhaust is blown away from living areas. Because many houses do not have central vacuuming systems, a portable HEPA vacuum is the next best choice (see Table 14.2). Vacuums without agitator heads appeared to perform relatively poorly on carpets.

A. Vacuums

Regular (non-HEPA) dry vacuums potentially produce hazardous levels of airborne dust and therefore should be avoided. Externally exhausted vacuum units with adequate dust-retaining capability may be used. The OSHA lead standard requires the use of HEPA vacuum equipment (see 29 CFR 1926.62 (h)(4), which states, "where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters").

B. Trisodium Phosphate and Other Detergents

TSP detergents have been used successfully for a number of years in lead hazard control work. However, in recent years, other new cleaning agents have been developed specifically for leaded dust removal. The need for alternatives has been fueled by the fact that TSP is an eye

Table 14.1 Initial Cleaning Wipe-Test Failure Rates for Various Abatement Strategies

Dust Test Location	Hand Scrape w/Heat Gun	Chemical Removal	Enclosure	Encapsulation	Replacement	All Methods
Floors	28.8%	22.7%	20.0%	13.8%	12.5%	19%
Sills	24.4%	24.1%	8.2%	4.8%	17.4%	14%
Wells	44.5%	45.7%	23.7%	25.7%	21.0%	33%

Source: U.S. Department of Housing and Urban Development (August 1991) The HUD Lead-Based Paint Abatement Demonstration (FHA)

and skin irritant and is increasingly restricted from household use and unavailable in many local jurisdictions. TSP also damages some finishes. Recently reported trials of two new products suggest that alternative lead-specific cleaning agents may be more effective and safer than TSP (Grawe, 1993; Wilson, 1993).

These *Guidelines* do not prohibit the use of non-TSP cleaning agents. HUD encourages further evaluation of alternative cleaning methods. Use of any cleaning agent that results in compliance with clearance criteria is encouraged.

Table 14.2 Mass Removal Efficiency for Extended Vacuuming Cycles

Cycle Number	Mass Removal Efficiency Percentages			
	Cleaning Method			
	Central Vacuum—Plain Tool	Central Vacuum—Agitator Head	HEPA Vacuum	Portable Vacuum—Plain Tool
1	34.7	71.0	55.4	17.5
2	47.0	80.2	61.2	23.0
3	51.9	85.9	66.3	26.6
4	56.0	87.8	67.0	29.4
5	59.3	88.9	72.1	32.5
6	61.6	91.2	74.4	34.9
7	63.8	93.1	76.4	36.5
8	67.5	95.4	77.5	38.1
9	67.5	97.7	78.7	40.1
10	67.2	100.0	80.2	41.7
11		102.3	80.2	41.7
12		104.6	84.1	44.8
13		104.6	84.5	46.8
14		103.8	84.5	48.4
15				49.6
16				50.8
17				52.4
18				53.6
19				54.4
20				55.2

Source: Canada Mortgage and Housing Corporation: Saskatchewan Research Council (December 1992) *Effectiveness of Clean-up Techniques for Leaded Paint Dust*

He-P 1608.11 Clean-up Requirements.

(a) The lead abatement contractor, owner-contractor, lead abatement supervisor, or the person(s) granted a variance by the commissioner to perform lead hazard reduction work shall be responsible for the following:

(1) All lead debris and lead contaminated materials shall be stored, managed, and disposed of in compliance with this section; and

(2) At the end of each workday, daily clean-up of the work area and all other areas where lead dust or lead contaminated materials are present shall consist of:

a. Removing all waste materials and debris generated by lead hazard reduction activities and securing in a designated storage area that is inaccessible to the public;
b. Cleaning all horizontal surfaces with a HEPA vacuum;
c. Inspecting polyethylene sheeting, and patching and repairing, if necessary; and
d. Securing the area to ensure that unauthorized persons do not have access.

(b) Daily clean-up of the interior shall not be required when all occupants, furnishings and belongings have been removed from the unit.

(c) Prior to any preliminary clearance inspection, the lead abatement contractor, owner-contractor, lead abatement supervisor, or the person(s) granted a variance by the commissioner to perform lead hazard reduction work shall be responsible for the work areas being cleaned as follows:

(1) All equipment used in lead hazard reduction work shall be cleaned with a general all-purpose or lead-specific cleaner or vacuumed with a HEPA vacuum prior to removal from the work area;

(2) All polyethylene sheeting and covering shall be wet misted;

(3) With the exception of the bottom layer of polyethylene covering the floor, all misted polyethylene shall be removed, with the sheeting used as a barrier to separate the contaminated area from uncontaminated areas being removed last;

(4) The misted polyethylene shall be folded in upon itself to capture the dust, placed in a double 4-mil, single 6-mil or equivalent plastic bag, and removed from the lead hazard reduction work area in compliance with this section;

(5) All lead-containing waste materials, including debris, used sealing tape, polyethylene sheeting, mop heads, sponges, air and vacuum filters, and disposable clothing, shall be placed in a double 4-mil, single 6-mil or equivalent container and disposed of in compliance with this section;

(6) All surfaces in the lead hazard reduction work area or containment area shall be cleaned by a cycle of HEPA vacuuming, wet washing with a general all-purpose or lead-specific cleaner and a repeat HEPA vacuuming; and

(7) The sequence of vacuuming, wet cleaning and vacuuming laid out in (6) above shall be repeated until no visible dust or residue is left in the containment area.

(d) Upon completion of lead hazard reduction work in the interior areas of a dwelling, dwelling unit or child care facility, the area shall be cleaned as follows:

(1) A final clean-up shall be conducted no sooner than one hour after the completion of lead hazard reduction work or surface preparation for repainting or sealing of lead-based substances;

(2) The final clean-up shall be performed in accordance with (c) above;

(3) All polyethylene sheeting covering the floor shall be completely removed; and

(4) All rugs, carpets or other fabric surfaces shall be steam cleaned.

(e) All wastes generated by lead hazard reduction work, including wastes generated during clean-up and preparation, shall be tested, stored, transported, managed, and disposed of in compliance with federal requirements under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 to 6992k, RSA 147-A, and Env-Wm 400 and Env-Wm 600.

(f) In addition to the requirements of (e) above, each owner-contractor or lead abatement contractor engaged in a lead hazard reduction project shall remove all lead-containing waste material from the site not later than 48 hours after completion of the final clean-up required above.

Source. #9986, eff 9-1-11 (from He-P 1605.12)

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	Third Floor Apt/Location	Date	Collected by	Result	Clearance Standard
BS	Brick Window Sill	5/11/2015	Risk Assessor	6,200 µg/ft^2	250µg/ft^2
US	Upper Window Wood Sill	5/11/2015	Risk Assessor	720 µg/ft^2	250µg/ft^2
W	Window Well	5/11/2015	Risk Assessor	4,400 µg/ft^2	400µg/ft^2
FD	Front Door Floor	5/11/2015	Risk Assessor	2,200 µg/ft^2	40µg/ft^2
FCA	Front Common Area Floor	5/11/2015	Risk Assessor	25,000 µg/ft^2	40µg/ft^2
LSB	Left Window Brick Sill	5/11/2015	Risk Assessor	4,500 µg/ft^2	250µg/ft^2
LW	Left Window Well	5/11/2015	Risk Assessor	4,200 µg/ft^2	400µg/ft^2
CLV	Analytical Field Blank	5/11/2015	Risk Assessor	<10 µg/ft^2	N/A
Sample Name	**Northwest Stairwell/Location**				
HR	McGregor Street Side Level 1 - hand rail	5/12/2015	HHLPPP	17 µg/ft^2	**(Note 4)**
ASL1	McGregor Street Side Level 1 – floor sample	5/12/2015	HHLPPP	1,300 µg/ft^2	40µg/ft^2
ASL2	McGregor Street Side Level 2 – floor sample	5/12/2015	HHLPPP	610 µg/ft^2	40µg/ft^2
ASL3	McGregor Street Side Level 3 – floor sample	5/12/2015	HHLPPP	630 µg/ft^2	40µg/ft^2
ASL3	McGregor Street Side Level 3 – floor sample	5/12/2015	HHLPPP	630 µg/ft^2	40µg/ft^2
BS	Analytical Field Blank	5/12/2015	HHLPPP	<0.5 µg/ft^2	N/A
Sample Name	**Exterior loose Blast Grit/Paint**				
ASBG	McGregor Street Side, NW corner of building – bulk sample	5/12/2015	HHLPPP	2,000 ppm	**(Note 5)**
Sample Name	**Center Entrance Common Stairwell/Location**				
L. Level Stairwell Floor	McGregor Street Side Lower Level - floor sample	5/14/2015	HHLPPP	28 µg/ft^2	40µg/ft^2
1st Floor Stairwell	McGregor Street Side 1st Floor – floor sample	5/14/2015	HHLPPP	41 µg/ft^2	40µg/ft^2
2nd Floor Stairwell	McGregor Street Side 2nd Floor – floor sample	5/14/2015	HHLPPP	82 µg/ft^2	40µg/ft^2
3rd Floor Stairwell	McGregor Street Side 3rd Floor – floor sample	5/14/2015	HHLPPP	73 µg/ft^2	40µg/ft^2
4th Floor Stairwell	McGregor Street Side 4th Floor – floor sample	5/14/2015	HHLPPP	42 µg/ft^2	40µg/ft^2
4th Floor window sill	McGregor Street Side 4th floor - Window Sill	5/14/2015	HHLPPP	76 µg/ft^2	250µg/ft^2
4th Floor window well	McGregor Street Side 4th Floor - Window well	5/14/2015	HHLPPP	230 µg/ft^2	400µg/ft^2
4th Floor stair cap	McGregor Street Side 4th Floor - Stair cap	5/14/2015	HHLPPP	41 µg/ft^2	**(Note 4)**

Laboratory Data 195 McGregor Street, Manchester, NH

Sample Name	NE Common Stairway	Date	Collected by	Result	Clearance Standard
NE Stairs LL Floor	Northeast corner entry lower level – floor sample	5/14/2015	HHLPPP	340 µg/ft^2	40µg/ft^2
NE Stairs LL Sill	Northeast corner entry lower level - window sill	5/14/2015	HHLPPP	2,800 µg/ft^2	250µg/ft^2
NE Stairs 4th	Northeast corner entry lower level – floor	5/14/2015	HHLPPP	97 µg/ft^2	40µg/ft^2
"5th Floor"	Analytical Field Blank	5/14/2015	HHLPPP	<0.5 µg/ft^2	N/A
Sample Name	**4th Floor Apartment**				
EWF	Entryway Floor	5/18/2015	HHLPPP	Results pending	40µg/ft^2
LF	Loft Area Floor	5/18/2015	HHLPPP	Results pending	40µg/ft^2
DWS	Dining Room Window Sill	5/18/2015	HHLPPP	Results pending	250µg/ft^2
Sample Name	**DHHS District Office**				
DHHSWS100WS	Workstation 100 Window Sill	5/18/2015	HHLPPP	Results pending	250µg/ft^2
DHHSIR1WS	Interview Room 1 Hallway Window Sill	5/18/2015	HHLPPP	Results pending	250µg/ft^2
DHHSIR1F	Interview Room 1 Floor	5/18/2015	HHLPPP	Results pending	40µg/ft^2
DHHSLRWS	Lunch Room North Window Sill	5/18/2015	HHLPPP	Results pending	250µg/ft^2
STEL1F	South Tower Entrance level 1 Floor	5/18/2015	HHLPPP	Results pending	40µg/ft^2
51815B	Analytical Field Blank	5/18/2015	HHLPPP	Results pending	N/A
XRF Testing Location	**Location/Component**	**Date**	**Tester**	**XRF Result/ (Hazard Type)**	**Standard**
1st Floor Work area NW Stairwell - Entry	McGregor Street Side Inner doors-door jamb	5/12/2015	HHLPPP	9.5 mg/cm^2 (friction surface)	1.0 mg/cm^2
McGregor Street Side Exterior (North)	McGregor Street Side Exterior window stop	5/12/2015	HHLPPP	2.5 mg/cm^2 (chipping)	1.0 mg/cm^2
McGregor Street Side overhead door	Overhead door frame	5/12/2015	HHLPPP	31.6 mg/cm^2 (chipping)	1.0 mg/cm^2
NW Stairwell	Wall	5/12/2015	HHLPPP	18.9 mg/cm^2 (chipping)	1.0 mg/cm^2
NE Stairwell	Painted (tan) brick wall	5/12/2015	HHLPPP	5.9 mg/cm^2 (chipping)	1.0 mg/cm^2
NE Stairwell	Stair riser	5/12/2015	HHLPPP	7.8 mg/cm^2 (impact)	1.0 mg/cm^2

Laboratory Data 195 McGregor Street, Manchester, NH

XRF Testing Location	Location/Component	Date	Tester	XRF Result/ (Hazard Type)	Standard
NE Stairwell	Stair tread	5/12/2015	HHLPPP	12.4 mg/cm^2 (friction)	1.0 mg/cm^2
NE Stairwell	Door (D-side) - paint intact, non-friction side	5/12/2015	HHLPPP	7.3 mg/cm^2	1.0 mg/cm^2
NE Entry doors	Door (left) - paint intact, door fixed open	5/12/2015	HHLPPP	4.6 mg/cm^2	1.0 mg/cm^2
NE Entry doors	Door (right) - paint intact, fixed open	5/12/2015	HHLPPP	4.3 mg/cm^2	1.0 mg/cm^2
XRF Testing Location	**4th Floor Apartment/Component**	**Date**	**Tester**	**XRF Result**	**Standard**
XRF Testing of sandblasted bare wood in apartment, listed below. Some visible paint in wood (not a lead exposure hazard as defined by RSA-130A)					
Dining Room-Merrimack River Side	Baseboard (east side of dining room)	5/18/2015	HHLPPP	0.6mg/cm^2	1.0 mg/cm^2
Loft Area	Ceiling	5/18/2015	HHLPPP	0.3 mg/cm^2	1.0 mg/cm^2
Loft Area	Exposed beam	5/18/2015	HHLPPP	3.7 mg/cm^2	1.0 mg/cm^2
Loft Area	Exposed beam	5/18/2015	HHLPPP	0.4 mg/cm^2	1.0 mg/cm^2

Notes:

1. All floor wipe samples are 12"X 12," and results reported as micrograms per square foot (µg/ft^2).
2. Window sill/window well wipe sample areas are measured, and results reported as micrograms per square foot (µg/ft^2).
3. EPA/HUD Clearance criteria are as follows, for dust wipes:
   - Floors: 40µg/ft^2
   - Window sills: 250µg/ft^2
   - Window wells: 400µg/ft^2.

   For soils, the clearance criteria are:

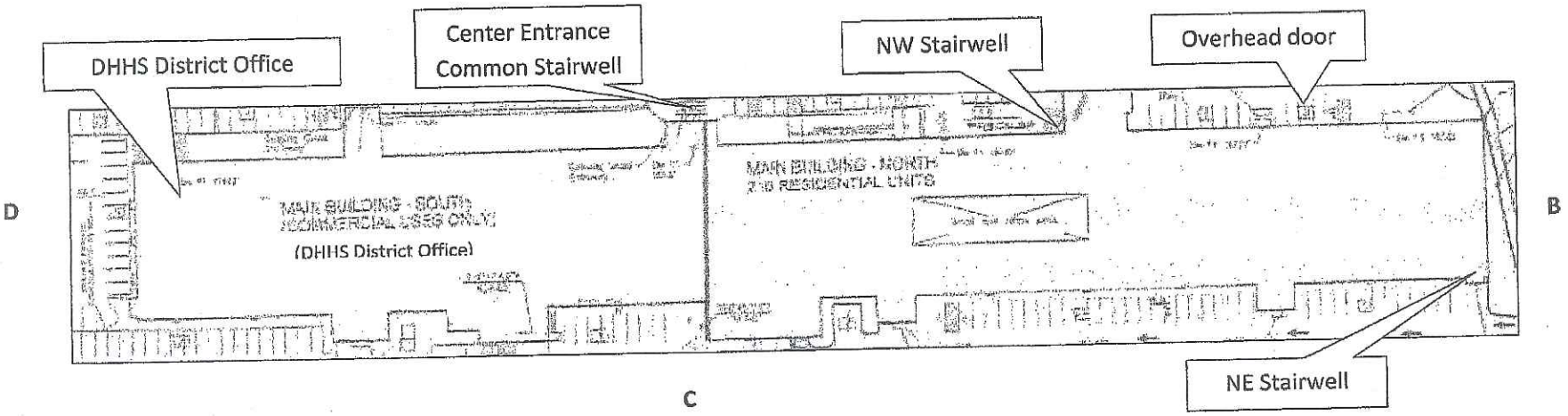
   - Soil <1200ppm
   - Child's play area <400ppm
4. No EPA standard for this component. Sampled due to visible dust.
5. Blast grit/paint chips, dust found outside containment area, on bldg. exterior. Exceeds EPA soil standard(s) listed above.

Laboratory Data 195 McGregor Street, Manchester, NH

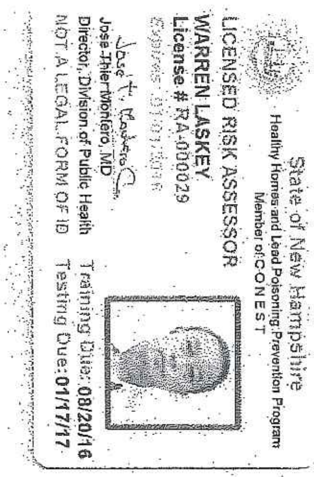
6. X-Ray Fluorescence (XRF) instrument measurements of dried film (paint) on a substrate must be ≥1.0 milligram per centimeter squared (mg/cm^2) to be lead paint, by definition. Not every instance of lead paint is necessarily a lead exposure hazard. Lead exposure hazard types (where applicable) are noted on the line item XRF reading.
7. Shaded area indicate laboratory data that exceeds a federal or state limit.
8. For additional definitions, see: http://www.gencourt.state.nh.us/rsa/html/X/130-A/130-A-1.htm

Building Sketch:

McGregor St Side (Side A)



Merrimack River Side


State of New Hampshire
Healthy Homes and Lead Poisoning Prevention Program
Member of C-O-N-E-S-T
LICENSED RISK ASSESSOR
WARREN LASKEY
License # RA-000029
Jose T. Montero, MD
Director, Division of Public Health
Training Due: 08/20/16
NOT A LEGAL FORM OF ID
Testing Due: 01/17/17